

Applicant: Baumann et al.
U.S. Serial No.: 10/669,271
Filed: September 23, 2003
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Amendment in Response to Non-Compliant Amendment – April 29, 2005

Amendment to Title:

Please amend the title as follows:

A Catalytic Composition and Method for Catalytic Conversion of Carbon Monoxide in a Gas Mixture Containing Hydrogen

Amendments to the claims:

This listing of claims will replace all prior versions, and listings of the claims in the application:

Claims 1-13 (canceled)

Claim 14 (currently amended): A noble metal shift catalyst for catalytic conversion of carbon monoxide in a hydrogen – containing gas with water to form carbon dioxide and hydrogen, said catalyst comprising platinum, palladium, iron and cerium oxide on finely divided aluminum oxide support material, wherein the catalyst is deposited on an inert carrier as a coating.

Claim 15 (canceled)

Claim 16 (currently amended): A shift catalyst according to claim 14 ~~15~~, wherein the catalyst further comprises iron and cerium oxide on the finely divided aluminum oxide support material in an amount of 1 to 50 weight % with respect to the total weight of the support material.

Claim 17 (currently amended): A shift catalyst according to claim 16, wherein the finely divided aluminum oxide support material is further doped with redox-active metal oxides of cerium, zirconium, titanium, vanadium, manganese, iron or combinations thereof.

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Claim 18 (currently amended): A shift catalyst according to claim 14, wherein the catalyst ~~operates at a~~ has an operating temperature ~~of between about~~ 180 to 550°C.

Claim 19 (canceled)

Claim 20 (currently amended): A shift catalyst according to claim 18 ~~19~~, wherein the catalyst ~~operates at a~~ has an operating temperature ~~of between~~ 180 and 300°C ~~and the gas mixture contains 2 to 15 vol% carbon monoxide.~~

Claim 21 (canceled)

Claim 22 (canceled)

Claim 23 (currently amended): A shift catalyst according to claim 18, wherein the catalyst has an operating temperature ~~of the shift catalyst lies between~~ 280 and 550°C.

Claim 24 (canceled)

Claim 25 (canceled)

Claim 26 (previously presented): A shift catalyst according to claim 14, wherein the catalyst is insensitive to oxygen in an educt gas mixture.

Claim 27 (previously presented): A shift catalyst according to claim 14, wherein the catalyst is not deactivated by contact with oxygen.

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Claim 28 (currently amended): A ~~method for operating a~~ shift catalyst according to claim 14, wherein the ~~catalyst is insensitive to oxygen in an educt gas mixture~~ support material has a specific surface of more than 10 m²/g.

Claim 29 (currently amended): A shift catalyst according to claim ~~14~~ 15, wherein the inert carrier is a honeycomb element of ceramic or metal, an open-cell ceramic, or metallic foam element, a metal sheet, a heat exchanger plate or an irregularly shaped element.

Claim 30 (new): A shift catalyst according to claim 29, wherein the inert carrier is a honeycomb of ceramic or metal with a cell density of more than 10 cm⁻².

Claim 31 (new): A shift catalyst according to claim 14, wherein the coating has a thickness between 10 and 100 μm